IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	**TAYLOR *ET AL.***	§	
		§	Group Art Unit: **3672**
Serial No.:	**10/787,363**	§	
		§	Examiner: **COY, NICOLE A.**
Filed:	**February 26, 2004**	§	
Title:	**"CO_2 MISCIBLE OPTIMIZED HYDROCARBON BLENDS AND METHODS OF USING CO_2 MISCIBLE OPTIMIZED HYDROCARBON BLENDS"**	§	Atty. Docket No: **2003-IP-012051U1**

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ATTY. DOCKET NO.: 2003-IP-012051U1
GROUP ART UNIT: 3672
EXAMINER: NICOLE A. COY

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

The following Pre-Appeal Brief Request for Review ("Request") is being filed in accordance with the provisions set forth in the Official Gazette Notice of July 12, 2005 ("OG Notice"). Pursuant to the OG Notice, this Request is being filed concurrently with a Notice of Appeal and the applicable fee. Applicants respectfully request reconsideration of the application in light of the remarks set forth below.

REMARKS

In a Final Office Action dated June 6, 2006 ("Final Office Action"), the Examiner improperly rejected claims 1-4, 12, 16-20, 28, and 32 under 35 U.S.C. § 102(b) as unpatentable over U.S. Patent No. 4,825,952 to Mzik ("*Mzik*"), and claims 5-11, 13-15, 21-27, and 29-31 under 35 U.S.C. § 103(a) as unpatentable over *Mzik*, either alone or in combination with other references. After Applicants filed a response to the Final Office Action, the Examiner mailed an Advisory Action on August 18, 2006 ("Advisory Action") maintaining those rejections. The rejections of claims 1-32 contain clear legal and factual deficiencies.

Specifically, *Mzik* does not disclose or teach every limitation of the claims 1-32, nor would the addition of those limitations missing in *Mzik* be obvious modifications. Independent claims 1 and 17 require, in part, that the servicing or fracturing fluid used therein comprise a hydrocarbon blend that "comprises at least about 65% hydrocarbons having from six carbons (C_6) to eleven carbons (C_{11})." *Mzik* does not disclose these limitations of claims 1 and 17, and thus, for at least that reason, *Mzik* cannot anticipate Applicants' claims. Claims 2-16 and 18-32 depend from claim 1 or 17, and thus are allowable for at least the same reasons. Moreover, the modification of *Mzik* to optimize the concentration of C_6-C_{11} hydrocarbons be at least 65% of the hydrocarbon blend, or any of the narrower ranges recited in claims 5, 6, 14, 15, 21, 22, 30, and 31 is not an obvious modificiation that a person of skill would make through routine experimentation, and thus *Mzik* cannot obviate Applicants' claims.

1. *Mzik* Does Not Disclose All of the Elements of Independent Claims 1 and 17, and Therefore, Cannot Anticipate Applicants' Claims.

The Examiner acknowledges that *Mzik* does not explicitly recite the specific range of concentrations of of C_6-C_{11} hydrocarbons recited in independent claims 1 and 17, but rather teaches a range of possible concentrations that encompasses, but is broader than those recited in Applicants' claims. (*See* Final Office Action at page 7.) However, the Final Office Action asserts that, in the absence of a showing of unexpected results within the narrower claimed range, *Mzik* nonetheless anticipates Applicants' claims. *See id.* In their response to the Final Office Action, Applicants submitted the Declaration of Gary P. Funkhouser ("Declaration") containing data that demonstrates that the hydrocarbon blends recited in Applicants' claims have unexpectedly-higher bubble point pressures, and thus will exhibit higher levels of volatility than those disclosed in *Mzik*. (*See* Declaration at pages 2-3.) However, the Advisory Action maintained the rejections, asserting that the Declaration does not demonstrate unexpected results within Applicants' claimed concentration ranges because: "(1) the declaration is not comparing

the prior art; (2) Example A [in the Declaration] does not appear to be the composition as claimed; and (3) Both Mixtures A and B in the declaration read on the composition of claim 1." (Advisory Action at page 2.) The Advisory Action's assertion that the Declaration does not show unexpected results of the claimed composition is incorrect.

First, contrary to the Advisory Action's assertion, the Declaration does compare the hydrocarbon blends taught in *Mzik* to those taught in Applicants' claims. *Mzik* discloses hydrocarbon blends that comprise at least 70% C_5-C_{14} hydrocarbons, which may be "obtained by blending of petroleum products of light and intermediate distillates," including kerosine. (*See Mzik* at col. 2, ll. 12-29.) Example A in the Declaration is based on the testing of a kerosine surrogate that comprises at least 70% of C_5-C_{14} hydrocarbons, which falls within the range disclosed in *Mzik*. Next, it is correct that Example A is not the composition recited in Applicants' claims; rather, Example A illustrates the properties of the hydrocarbon blends disclosed in *Mzik* that do not fall within the scope of Applicants' claims, for comparison with hydrocarbon blends that do fall within the scope of Applicants' claims (*e.g.*, Example B). Finally, contrary to the Advisory Action's assertion, Mixture A does not read on the compositions recited in Applicants' claims. Mixture A comprises 20% of dodecane ($C_{12}H_{25}$), 15% of tetradecane ($C_{14}H_{30}$), and 10% hexadecane ($C_{16}H_{34}$). (*See* Declaration at page 2.) Thus, since these components that are larger than C_{11} comprise 45% of Mixture A, it cannot comprise at least 65% of C_6-C_{11} hydrocarbons. Thus, the Declaration properly compares examples of hydrocarbon blends disclosed in *Mzik* (*e.g.*, Example A) and those falling within the scope of Applicants' claims (*e.g.*, Example B).

Applicants incorporate by reference the remarks presented in their response to the Final Office Action, and maintain that the data in the Declaration indicate that the hydrocarbon blends generically disclosed by *Mzik* have much lower bubble points, and thus will not exhibit the same level of volatility as those in Applicants' claims. (*See* Response to Final Office Action at pages 8-10.) Thus, the hydrocarbon blends in *Mzik* do not disclose hydrocarbon blends comprising at least about 65% of C_6-C_{11} hydrocarbons with "sufficient specificity to constitute an anticipation under the statute." MANUAL OF PATENT EXAMINING PROCEDURE § 2131.03 (II) (2005) (hereinafter "MPEP"). Thus, since *Mzik* does not disclose this element of independent claims 1 and 17, from which each of Applicants' claims depends, *Mzik* cannot anticipate any of Applicants' claims.

2. *Mzik* Does Not Teach All of the Elements of Independent Claims 1 and 17, and Therefore, Cannot Obviate Applicants' Claims.

The Examiner has rejected claims 5-11, 13-15, 21-27, and 29-31 under 35 U.S.C § 103(a) as being unpatentable over *Mzik*, either alone or in combination with other references, based on the assertion that *Mzik* teaches the elements recited in claims 1 and 17 that are incorporated into claims 5-11, 13-15, 21-27, and 29-31. (*See* Final Office Action, at pages 3-7.) However, as discussed above, *Mzik* does not teach or suggest a hydrocarbon blend that "comprises at least about 65% hydrocarbons having from six carbons (C_6) to eleven carbons (C_{11})." Since claims 5-11, 13-15, 21-27, and 29-31 depend, directly or indirectly, from claim 1 or 17, these dependent claims include the limitations of claims 1 and 17 that *Mzik* does not teach or suggest. Therefore, claims 5-11, 13-15, 21-27, and 29-31 are allowable over *Mzik*, either alone or in combination with the other references cited.

3. Optimization of Concentration Ranges in Applicants' Claims Would Not be Obvious in View of *Mzik*.

The Examiner has rejected claims 5, 6, 14, 15, 21, 22, 30, and 31 under 35 U.S.C. § 103(a), in part, on the grounds that, although *Mzik* does not specifically teach the optimized hydrocarbon concentrations recited in those claims, such optimization would be routine experimentation for a person of skill in the art, and thus those claims are obvious in view of *Mzik*. (*See* Final Office Action at pages 9-11.) This is incorrect.

First, as Applicants noted in their response to the Final Office Action, the Examiner still has not shown that the parameter being optimized (*i.e.*, the concentrations of the different sizes of hydrocarbons recited in Applicants' claims) "is recognized as a result-effective variable, *i.e.*, a variable which achieves a recognized result," as is required for a § 103(a) rejection on these grounds. MPEP § 2144.05 (II.B.) (2005) (emphasis added) (citing *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977), section titled "Only Result-Effective Variables Can Be Optimized"). The Examiner asserts that "the burden is not on the prior art reference to show that a claimed range achieves a particular result," and that Applicants have failed to rebut the obviousness rejection by showing the criticality of the ranges recited in their claims. (*See, e.g.*, Final Office Action at page 9.) However, as the Manual of Patent Examining Procedure clearly states, the Examiner must establish recognition of the result-effective variable in the prior art. MPEP § 2144.05 (II.B.) (2005). Only then can Applicants be required to rebut the obviousness of optimizing that variable.

Furthermore, Applicants have presented evidence of the unexpected results and

properties of the hydrocarbon blends recited in their claims to rebut these obviousness rejections. As discussed in Section 1. above and in their response to the Final Office Action, the data in the Declaration of Gary P. Funkhouser indicate that the hydrocarbon blends generically disclosed by *Mzik* have much lower bubble points, and thus will not exhibit the same level of volatility as those in Applicants' claims. (*See* Response to Final Office Action at page 9.) These unexpected results and properties of the hydrocarbon blends recited in Applicants' claims clearly show that the concentrations of hydrocarbons recited therein are not obvious optimizations.

Thus, the rejections of claims 5, 6, 14, 15, 21, 22, 30, and 31 under § 103(a), as well as any rejections of claims 1-32 under § 103(a) that rely on this rationale to modify the hydrocarbon blends taught in *Mzik*, are improper. Accordingly, Applicants respectfully request the withdrawal of these rejections.

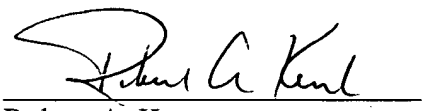
CONCLUSION

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same.

Applicants hereby petition under the provisions of 37 C.F.R. § 1.136(a) for a one-month extension of time to file these papers, up to and including October 6, 2006.

The Commissioner is hereby authorized to debit should the Deposit Account of Halliburton Energy Services, Inc., No. 08-0300, in the amount of $120.00 for the fee under 37 C.F.R. § 1.17(a)(1) for the one-month extension of time to file this response. Should the Commissioner deem that any additional fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to the Deposit Account of Halliburton Energy Services, Inc., No. 08-0300.

Respectfully submitted,



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